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10/562,811	12/29/2005	Hiroaki Sano	012774-006	6482

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EXAMINER
CAILLOUET, CHRISTOPHER C

ART UNIT	PAPER NUMBER
1791	

NOTIFICATION DATE	DELIVERY MODE
09/01/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

	Application No.	Applicant(s)
Office Action Summary	10/562,811	SANO ET AL.
	Examiner	Art Unit	
	CHRISTOPHER C. CAILLOUET	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2009*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-10 and 13* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-3,6-10 and 13* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *08/13/09*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office

action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since

this application is eligible for continued examination under 37 CFR 1.114, and the fee

set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has

been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on August 13,

2009 has been entered.

2.   Prosecution on the merits of this application is reopened on claims 1-3, 6-10, and

13 are considered unpatentable for the reasons indicated below:

-Claims 1-3, 6-10, and 13 fail to comply with the §112 1st paragraph enablement

requirement.

-Claims 1-3, 6-10, and 13 are unpatentable under §103(a) the prior art of Ivansons et al.

(US 5279685), Fleischmann et al. (US 5059270), and Sano et al. (US 6463979).

3.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 1-3, 6-10, and 13 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the enablement requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to enable one skilled in

the art to which it pertains, or with which it is most nearly connected, to make and/or use

the invention. Claim 1, lines 22-27 recite the following limitations:

> wherein the controlling section comprises a non-volatile memory which memorizes information
> expressing that the apparatus is in a connecting operation state in which the end portions of
> the cut tubes are being connected, and wherein the controlling section is programmed to
> judge, when power is supplied, that a reset operation is necessary when the information
> memorized in the non-volatile memory is information expressing that the apparatus is in the
> connecting operation state, and initiates the reset operation during which the cutting section is
> heated again, the connecting operation is restarted to finish the connecting operation, and an
> error indication is displayed on the display section.

The limitation wherein the controlling section "initiates the reset operation during

which the cutting section is heated again" is not supported in the specification.

Examiner points out that in paragraph 94 of the specification Applicant states that the

reset subroutine is only performed by the apparatus after the operator presses the reset

switch, thus initiating the reset subroutine/operation, and not the controlling section as is

claimed.   In the art of tube connecting apparatuses, it is known for a controlling unit to

memorize the position of the cutting wafer and to indicate whether said wafer is in the

starting position or in the cutting/connecting position. When the wafer is not in the

starting position, an operator is notified of this usually by an error indication, so that the

operator may take any appropriate actions required to get the apparatus running

properly again, such as pressing a reset button. Thus the operator, not the controlling

section, makes the decision whether the apparatus is ready to perform the reset

operation and when to initiate said reset operation.

Claim Rejections - 35 USC § 103

6.   Claims 1-3, 6-9, and 13 are rejected under 35 U.S.C. 103(a) as obvious over

Ivansons et al. (US 5279685) in view of Fleischmann et al. (US 5059270).

    As to claims 1 and 2, Ivansons et al. (Ivansons) discloses a device for selectively

connecting and disconnecting plastic tubes which includes a welder (Abstract).

Ivansons discloses that the apparatus has a holding section which presses tubing into a

flat state (column 7, lines 9-10), a cutting section (wafer) which cuts the tubes held in a

flat state by the holding section (column 3, lines 45-47), heater elements for heating the

cutting section (column 4, lines 11-13), a unit that moves the wafer from the start

position to the cutting position (column 3 line 67- column 4, line 10), a sensor that

detects the movement of the wafer (column 4, lines 14-19), a unit that moves the

holding sections together in order to weld the tubing together (column 8, lines 16-27),

and a computer which controls the power supply to the wafer heater and the wafer

movement unit (column 5, lines 35-41). Ivansons further discloses that the computer

checks the status of the necessary apparatus elements in order to determine if the

device is ready for operation and if it will do a connect or disconnect with the tubes

(column 10, lines 23-30). Ivansons discloses that the computer may use non-volatile

memory which memorizes the connecting process information, whether the apparatus is

in the connect/disconnect mode (column 11, lines 27-35) (Claim 2). Ivansons discloses

that the computer stores whether the apparatus is in the connect/disconnect position

(column 11, lines 16-30). Ivansons discloses that the controller tests the tubing to

determine whether or not the tubes are loaded properly; when the wafer begins heating

the tubes the time is noted and saved by the controller, and the tubes are driven into the

sides of the wafer at a controlled rate determined by the melt rheology (column 8, lines

10-15). Ivansons does not specifically state that power is supplied to an electrode to

heat the wafer, but it is likely inherent that an electrode is used on the circuit that

Ivansons computer uses to supply power to the heating unit for the wafer.

In the event that Ivansons uses an electric supply other than an electrode, it is

the position of the examiner that use of an electrode to heat a cutting member for

welding plastic tubes is well known in the art and would have been obvious to one of

ordinary skill in the art to use as a heater in the apparatus of Ivansons. An example of

this is taught by Fleischmann et al. (Fleischmann; US 5059270). Fleischmann teaches

a process for the welding of plastic films (Abstract). Fleischmann teaches the use of a

plastics welding electrode wherein the electrode is used to supply heat to a cutting

blade which cuts and welds the plastic film (column 4 lines 57-68). It would have been

obvious to one of ordinary skill in the art to use a well-known method of heating a

cutting blade/wafer for the welding of plastics such as the use of an electrode.

Claims 1-2 both recite the limitation "wherein the controlling section judges, when

power is supplied, that a reset operation is necessary when the information memorized

in the non-volatile memory is information expressing that the apparatus is in the

connection operation state,". As best as can be understood from the Specification, this

means that when the apparatus is turned on/supplied power; the controlling unit/CPU

determines whether the apparatus is in a connecting state or non-connecting state; if

the CPU determines that the apparatus is in a connection operation state, the wafer is

not in the start position, and the operator is notified that there is an error in the process. Ivansons discloses that magnetic encoders (87, 107) are used to determine exactly where the wafer carriage and tube holding arms are at any given time (column 10, lines 3-15). According to the control logic disclosed by Ivansons in Fig. 29A-C, power was supplied to the machine, turning it on, and the controlling unit determined that the cutting wafer was in the connecting state, i.e. not in the starting position, the operator would be notified because LED 115 would indicate that the wafer was not in the proper position (column 8, lines 27-35).

As to claim 3, Ivansons discloses the use of a lock lip that prevents the tube holding means from disengaging with the tubes (column 4, lines 23-43). Ivansons further discloses that a sensing means (column 4, lines 63-66) can be included so that the computer can ensure the clamps are in their closed position before starting the welding process (column 7, lines 60-64). Claim 3 further recites the limitation that while in the connecting state, the controller detects that the cutting section is in the tube cutting position, that the holding section locks are engaged, the controller judges that a reset operation is necessary and initiates the reset operation. From this statement, it is unclear whether the controller must be programmed with this control logic or only has to be capable of being programmed with this control logic. Examiner finds that since the apparatus of Ivansons has a controller with non-volatile memory that is capable of being programmed with this control logic it anticipated the limitation listed in the claim language.

As to claim 6, the method of claim 2 is taught as seen above. Ivansons discloses the use of sensors to detect whether the holding sections have reached a position where the tubes may contact each other and thus form a weld (column 5, line 63- column 6, line 2). Ivansons discloses that the computer stores whether the apparatus is in the connect/disconnect position (column 11, lines 16-30).

As to claims 7-8 and 13, the method of claim 2 is taught as seen above. As stated previously, Ivansons discloses a unit that moves the wafer from the start position to the cutting position (column 3 line 67- column 4, line 10), a sensor that detects the movement of the wafer (column 4, lines 14-19). Ivansons discloses that the apparatus has a wafer supply section which supplies wafers to the cutting section (column 7, lines 33-40). The nonvolatile memory remembers the exchange process for disposing of a used wafer and inserting a new wafer for the process (column 7, lines 40-43; column 8, lines 16-23). The computer also determines whether a new wafer is loaded properly before allowing the welding process to begin (Id.). Ivansons further discloses that during the disconnect process, exchange information in the non-volatile memory is used by the computer change the exchanged status of the wafer to unexchanged status so as to convey the used wafer in the disconnect process to the wafer removal station after performing the disconnect process (column 9, lines 39-45).

As to claim 9, the method of claim 2 is taught as seen above. Ivansons discloses the use of a lock lip that prevents the tube holding means from disengaging with the tubes (column 4, lines 23-43). Ivansons further discloses that a sensing means (column

4, lines 63-66) can be included so that the computer can ensure the clamps are in their

closed position before starting the welding process (column 7, lines 60-64).

As to claims 11 and 12, Ivansons et al. (Ivansons) discloses a device for

selectively connecting and disconnecting plastic tubes which includes a welder

(Abstract). Ivansons discloses that the apparatus has a holding section which presses

tubing into a flat state (column 7, lines 9-10), a cutting section (wafer) which cuts the

tubes held in a flat state by the holding section (column 3, lines 45-47), an heater

elements for heating the cutting section (column 4, lines 11-13), a unit that moves the

wafer from the start position to the cutting position (column 3 line 67- column 4, line 10),

a sensor that detects the movement of the wafer (column 4, lines 14-19), a unit that

moves the holding sections together in order to weld the tubing together (column 8,

lines 16-27), and a computer which controls the power supply to the wafer heater and

the wafer movement unit (column 5, lines 35-41). Ivansons further discloses that the

computer judges checks the status of the necessary apparatus elements in order to

determine if the device is ready for operation and if it will do a connect or disconnect

with the tubes (column 10, lines 23-30). Ivansons also discloses the use of a lock lip

that prevents the tube holding means from disengaging with the tubes (column 4, lines

23-43). Ivansons further discloses that a sensing means (column 4, lines 63-66) can be

included so that the computer can ensure the clamps are in their closed position before

starting the welding process (column 7, lines 60-64). Ivansons discloses the use of a

visual display device to for the computer to indicate such things as whether the wafer is

properly loaded (column 8, lines 29-31) or if the welder is in the connect/disconnect

mode (column 9, lines 8-10). Ivansons further discloses that the computer may use
non-volatile memory which memorizes the connecting process information and whether
the apparatus is in the connect/disconnect mode (column 11, lines 27-35). Ivansons
discloses that if a reset operation is necessary upon start up of the apparatus the
display section will display an error indication (column 7, lines 40-43).

Ivansons does not specifically state that power is supplied to an electrode to heat
the wafer, but it is inherent that an electrode is used on the circuit that Ivansons
computer uses to supply power to the heating unit for the wafer. It is the position of the
examiner that use of an electrode to heat a cutting member for welding plastic tubes is
well known in the art and would have been obvious to one of ordinary skill in the art to
use as a heater in the apparatus of Ivansons. An example of this is taught by
Fleischmann et al. (Fleischmann). Fleischmann teaches a process for the welding of
plastic films (Abstract). Fleischmann teaches the use of a plastics welding electrode
wherein the electrode is used to supply heat to a cutting blade which cuts and welds the
plastic film (column 4 lines 57-68). It would have been obvious to one of ordinary skill in
the art to use a well-known method of heating a cutting blade/wafer for the welding of
plastics such as the use of an electrode.

7.   Claim 10 is rejected under 35 U.S.C. 103(a) as obvious over Ivansons et al. (US
5279685) in view of Fleischmann et al. (US 5059270), as applied to claim 3 above, and
further in view of Sano et al. (US 6463979).

Ivansons fails to disclose the use of a solenoid and a plunger to help ensure that
the holding members stay in the closed position. Sano et al. (Sano) discloses a tube

connecting apparatus for melting to cut flexible tubes for connecting the tubes by

mutually contacting the cut end faces (column 1, lines 7-9). Sano teaches the use of a

solenoid and a plunger to help ensure that the holding members stay in the closed

position (column 15, lines 23-29). Sano teaches the use of the solenoid and the plunger

prevents the clamps from being erroneously opened during the welding process. It

would have been obvious to one of ordinary skill in the art to incorporate the teachings

of Sano et al. into the apparatus of Ivansons et al. because Sano et al. teaches that the

use of a solenoid and plunger ensure that the holding members don't erroneously open

during the process and allow unwanted movement of the tubes.

Response to Arguments

8.   Upon review of references disclosed in the IDS submitted August 13, 2009,

reconsideration of the claims brought new interpretations of claims to light that were not

previously considered, forming the basis of the rejections listed above.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CHRISTOPHER C. CAILLOUET whose telephone

number is (571)270-3968. The examiner can normally be reached on Monday -

Thursday; 9:30am-4:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Phillip Tucker can be reached on (571) 272-1095. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher C Caillouet/
Examiner, Art Unit 1791

                                        /Mark A Osele/
                                        Primary Examiner, Art Unit 1791
                                        August 27, 2009